AMENDMENTS TO THE CLAIMS

Please amend the claims as they currently stand so that they are in accord with the following listing of the claims:

Claim 1 (currently amended): A computerized method for calculating charges for transporting a shipment of freight, said shipment comprising one or more packages, said method comprising the steps of:

gathering physical property data about a carrier unit using a processing system, said physical property data about said carrier unit comprising carrier unit dimensions and weight limit of said carrier unit;

calculating a total available capacity in said carrier unit using said processing system, wherein said total available capacity comprises a weight limit for said carrier unit and a volume of said carrier unit;

storing said total available capacity in said carrier unit in a memory of said processing system;

gathering a distance a first shipment is to be transported using said processing system;

gathering physical property data about said first shipment using said processing system, wherein said physical property data about said first shipment is selected from the group consisting of dimensions of one package in said shipment, volume of one package in said shipment, weight of one package in said shipment, mass of one package in said shipment, dimensions of said shipment, weight of said shipment, volume of said shipment, mass of said shipment, number of packages in said shipment, density of said shipment, class of said shipment;

calculating an amount of said total available capacity to be occupied by said first shipment in said carrier unit using said processing system, wherein said amount of total available capacity to be occupied by said first shipment comprises a total weight of said first shipment and a total volume to be occupied by said first shipment;

storing said amount of said total available capacity occupied by said first shipment in said carrier unit in said memory of said processing system;

automatically determining an optimal spatial orientation of one or more packages of said first shipment relative to each other and to said carrier unit available capacity using said processing system;

storing said optimal spatial orientation of said one or more packages of said first shipment in said memory of said processing system;

calculating a remaining available capacity in said carrier unit, using said processing system, after said first shipment is optimally oriented ~~loaded~~ in said carrier unit;

storing said remaining available capacity in said carrier unit in said memory of said processing system;

~~calculating~~ determining a rate to be charged for said first shipment, using said processing system, based upon said amount of said total available capacity occupied by said first shipment in said carrier unit and said distance said first shipment is to be transported;

storing said rate in said memory of said processing system;

calculating a total charge for transporting said first shipment using said processing system; and

displaying said total charge on a display of said processing system~~; and~~

~~determining an optimal orientation of said first shipment relative to said carrier unit available capacity using said processing system~~.

Claim 2 (cancelled):

Claim 3 (currently amended): The method as recited in claim [[2]]1, further comprising:

gathering a distance a second shipment is to be transported using said processing system;

gathering physical property data about said second shipment using said processing system, wherein said physical property data about said second shipment is selected from the group consisting of dimensions of one package in said second shipment, volume of one package in said second shipment, weight of one package in said second shipment, mass of one package in said second shipment, dimensions of said second shipment, weight of said second shipment, volume of said second shipment, mass of said second shipment, number of packages in said second shipment, density of said second shipment, class of said second shipment;

calculating an amount of said total available capacity to be occupied by said second shipment in said carrier unit using said processing system, wherein said amount of total available capacity to be occupied by said second shipment comprises a total weight of said second shipment and a total volume to be occupied by said second shipment;

storing said amount of said total available capacity occupied by said second shipment in said carrier unit in said memory of said processing system;

determining an optimal spatial orientation of one or more packages of said first shipment and one or more packages of said second shipment relative to said carrier unit and relative to each other using said processing system;

storing said optimal spatial orientation of said first shipment and said second shipment in said memory of said processing system;

calculating a remaining available capacity in said carrier unit, using said processing system, after said ~~second~~ shipments [[is]] are optimally oriented ~~loaded~~ in said carrier unit;

storing said remaining capacity in said carrier unit in said memory of said processing unit;

~~calculating~~ determining a rate to be charged for said second shipment, using said processing system, based upon said amount of said total available capacity occupied by said second shipment in said carrier unit and said distance said second shipment is to be transported;

storing said rate in said memory of said processing system;

calculating a total charge for transporting said second shipment using said processing system; and

displaying said total charge on said display of said processing system.

Claim 4 (cancelled):

Claim 5 (cancelled):

Claim 6 (currently amended): The method as recited in claim 1, wherein said step of ~~calculating~~ determining a rate to be charged for said shipment comprises:

calculating a fair price for transporting a shipment having substantially similar physical properties to said first shipment, using said processing system.

Claim 7 (previously presented): The method as recited in claim 1, wherein said step of calculating a total charge for transporting said first shipment comprises:

calculating a total density capacity of said carrier unit by dividing said weight limit of said carrier unit by said volume of said carrier unit using said processing system;

calculating a volume of said first shipment using said processing system;

calculating a density of said first shipment using said processing system;

computing a first cube charge calculation value by dividing said rate by said total density capacity using said processing system;

computing a second cube charge calculation value by dividing the product of the volume of said carrier unit multiplied by the total density capacity of said carrier unit by a density of said first shipment using said processing system;

calculating a third cube charge computation value by dividing said first cube charge computation value by said second cube charge computation value using said processing system; and

multiplying said third cube charge computation value by a number of miles said first shipment is to be transported, the density of said first shipment and the volume of said first shipment using said processing system.

Claim 8 (previously presented): The method as recited in claim 1 wherein said step of calculating a total charge for transporting said first shipment comprises:

determining a total length of said first shipment;

determining a total length of said carrier unit;

dividing said rate by said length of said carrier unit using said processing system; and

multiplying the product of said rate divided by said total length of said carrier unit by said distance said first shipment is to be transported and a length of said first shipment using said processing system.

Claim 9 (previously presented): The method as recited in claim 1 wherein said step of calculating a total charge for transporting said first shipment comprises:

calculating a volume of said shipment using said processing system;

calculating a density of said first shipment using said processing system;

determining a density class of said shipment using said processing system;

calculating a total density capacity of said carrier unit by dividing the weight limit of said carrier unit by the volume of said carrier unit using said processing system;

computing a first class charge calculation value by dividing the product of the rate divided by said total density capacity of said carrier unit by said volume of said carrier unit using said processing system;

computing a second class charge calculation value by dividing the total density capacity of said carrier unit by said density of said first shipment using said processing system; and

multiplying said first class charge calculation value, said second class charge computation value, said distance said first shipment is to be transported, said class density value and said volume of said shipment using said processing system.

Claim 10 (previously presented): The method as recited in claim 1, wherein said step of calculating a total charge for transporting said first shipment comprises:

determining a total weight of said first shipment;

determining a total volume of said first shipment;

calculating a density of said first shipment using said processing system;

dividing said rate by the product of said shipment density multiplied by the shipment volume to calculate a weight charge value using said processing system; and

multiplying said weight charge value by said total weight of said first shipment and said distance said first shipment will be transported using said processing system.

Claim 11 (previously presented): A data processing system for calculating charges for transporting a shipment of freight, said shipment comprising one or more packages, said system comprising:

a computing device and a display;

means for entering information about a carrier unit, said information about said carrier unit comprising one or more members of the group consisting of dimensions of said carrier unit, weight capacity of said carrier unit, density capacity of said carrier unit; and length of said carrier unit;

means for calculating a total volume and a weight capacity of said carrier unit based on said entered information about said carrier unit;

means for storing said total volume and said weight capacity of said carrier unit;

means for displaying said total volume and said weight capacity of said carrier unit;

means for entering a distance a first shipment is to be transported;

means for entering information about said first shipment, said information about said first shipment comprising one or more members of the following: dimensions of one package in said shipment, volume of one package in said shipment, weight of one package in said shipment, mass of one package in said shipment, dimensions of said shipment; volume of said shipment, weight of said shipment, mass of said shipment, density of said shipment, number of packages in said shipment; and class of said shipment;

means for determining a value for said first shipment of a volume of said first shipment, a density of said first shipment, a total weight of said first shipment, and a total length of said first shipment based on said information entered about said first shipment;

means for storing said values of said volume of said first shipment, said density of said first shipment, said total weight of said first shipment, and said total length of said first shipment based on said information entered about said first shipment;

means for displaying said calculated values for said first shipment;

means for determining the optimal orientation of one or more packages in said first shipment relative to said carrier unit;

means for storing said optimal orientation of said one or more packages in said first shipment;

means for displaying said optimal orientation of said one or more packages in said first shipment;

means for determining an amount of carrier unit total area occupied by said first shipment and a portion of weight capacity occupied by said first shipment;

means for storing said amount of carrier unit area occupied by said first shipment and said portion of weight capacity occupied by said first shipment; and

means for displaying said amount of carrier unit area and said portion of weight capacity occupied by said first shipment.

Claim 12 (previously presented): The data processing system as recited in claim 11 further comprising:

means for entering a distance a second shipment is to be transported;

means for entering information about said second shipment, said information about said second shipment comprising at least one member of the following: dimensions of one package in said second shipment, volume of one package in said second shipment, weight of one package in said second shipment, mass of one package in said second shipment, dimensions of said second shipment; volume of said second shipment, weight of said second shipment, mass of said second shipment, density of said second shipment, number of packages in said second shipment and class of said second shipment;

means for calculating values for a volume of said second shipment, a density of said second shipment, a total weight of said second shipment, and a total length of said second shipment;

means for storing said values of said volume of said second shipment, said density of said second shipment, said total weight of said second shipment, and said total length of said second shipment;

means for displaying said values for said second shipment;

means for determining the optimal orientation of one or more packages in said second shipment relative to said carrier unit and relative to said first shipment;

means for storing said optimal orientation of said one or more packages in said second shipment;

means for displaying said optimal orientation of said one or more packages in said second shipment;

means for determining an amount of carrier unit total area occupied by said second shipment and a portion of weight capacity occupied by said second shipment; and

means for storing said amount of carrier unit area occupied by said second shipment and said portion of weight capacity occupied by said second shipment; and

means for displaying said amount of carrier unit area and said portion of weight capacity occupied by said second shipment.

Claim 13 (original): The data processing system as recited in claim 11, further comprising:

means for calculating charges for transporting said first shipment.

Claim 14 (previously presented): The data processing system as recited in claim 13 wherein said means for calculating said charges for transporting said first shipment comprises:

means for entering a rate to be charged based on said distance said first shipment is to be transported and at least one physical property of said shipment;

application for recalling at least one member of the following group: total volume occupied by said first shipment, total weight of said first shipment, total length of said first shipment or class of said first shipment;

application for recalling said total available capacity of said carrier unit;

application for recalling said distance that said first shipment is to be transported; and

application for calculating charges for transporting said shipment relative to said total capacity of said carrier unit based on said distance and at least one member of the following: total volume occupied by said shipment, total weight of said shipment, total length of said shipment and class of said shipment.

Claim 15 (currently amended): A computer program product for use with a data processing system for calculating charges for transporting a shipment of freight, said shipment comprising one or more packages, said product comprising:

a computer usable medium having computer readable program code means embodied in said medium for determining available capacity in a carrier unit when said code means for determining said available capacity in said carrier unit is executed on a data processing system;

the computer usable medium having computer readable program code means embodied in said medium for determining an amount of space to be occupied by a first shipment in said

carrier unit when said code means for determining an amount of space to be occupied by said first shipment in said carrier unit is executed on said data processing system;

~~the computer usable medium having computer readable program code means embodied in said medium for determining remaining capacity in said carrier unit, when said code means for determining said remaining capacity in said carrier unit is executed on said data processing system, after said first shipment is loaded onto said carrier unit;~~

the computer usable medium having computer readable program code means embodied in said medium for determining an optimal orientation for said first shipment in said carrier unit when said code means for determining said optimal orientation of said first shipment in said carrier unit is executed on said data processing system;

the computer usable medium having computer readable program code means embodied in said medium for determining remaining capacity in said carrier unit, when said code means for determining said remaining capacity in said carrier unit is executed on said data processing system, after said first shipment is loaded onto said carrier unit;

the computer usable medium having computer readable program code means embodied in said medium for storing said available capacity of said carrier unit, said amount of space to be occupied by said first shipment in said carrier unit, said remaining space in said carrier unit after said first shipment is loaded into said carrier unit, and said optimal orientation of said first shipment in said carrier unit when said code means for said storing is executed on said data processing system; and

the computer usable medium having computer readable program code means embodied in said medium for determining whether additional packages can be added to said carrier unit when said code means for determining whether said additional packages can be added to said carrier unit is executed on said data processing system.

Claim 16 (currently amended): The computer program product as recited in claim 15 further comprising:

the computer usable medium having computer readable program code means embodied in said medium for determining an amount of space to be occupied by a second shipment in said

carrier unit when said code means for determining said amount of space to be occupied by said second shipment in said carrier unit is executed on said data processing system;

~~the computer usable medium having computer readable program code means embodied in said medium for determining remaining capacity in said carrier unit, when said code means for determining said remaining capacity in said carrier unit is executed on said data processing system, after said second shipment is loaded onto said carrier unit;~~

the computer usable medium having computer readable program code means embodied in said medium for determining an optimal orientation for said second shipment in said carrier unit relative to said first shipment when said code means for determining said optimal orientation for said second shipment in said carrier unit is executed on said data processing system;

the computer usable medium having computer readable program code means embodied in said medium for determining remaining capacity in said carrier unit, when said code means for determining said remaining capacity in said carrier unit is executed on said data processing system, after said second shipment is loaded onto said carrier unit;

the computer usable medium having computer readable program code means embodied in said medium for storing said amount of space to be occupied by said second shipment in said carrier unit, said remaining space in said carrier unit after said second shipment is loaded into said carrier unit, and said optimal orientation of said second [[first]] shipment in said carrier unit when said code means for said storing is executed on said data processing system; and

the computer usable medium having computer readable program code means embodied in said medium for determining whether additional packages can be added to said carrier unit when said code means for determining whether additional packages can be added to said carrier unit is executed on said data processing system.

Claim 17 (currently amended): The computer program product as recited in claim 15, further comprising:

a computer usable medium having computer readable program code means embodied in said medium for entering a rate to be charged based on [[said]]a distance and at least one physical property of said first shipment when said code means for entering a rate to be charged is executed on said data processing system;

the computer usable medium having computer readable program code means embodied in said medium for determining at least one member of the following group: a total volume occupied by said first shipment, a total weight occupied by said first shipment, a total length of said first shipment or a class of said first shipment, when said code means for determining at least one member is executed on said data processing system; and

the computer usable medium having computer readable program code means embodied in said medium for calculating charges for transporting said shipment relative to said total capacity of said carrier unit based on said distance and at least one member of the following: total volume occupied by said shipment, total weight of said shipment, total length of said shipment and class of said shipment, when said code means for calculating charges is executed on said data processing system.